

**Tetra Tech, Inc.**

4213 State Street, Suite 100
 Santa Barbara, CA 93110-2847
 VOICE (805) 681-3100 FAX (805) 681-3108

Project: **Vandenberg Air Force Base IRP**
 Log of Well No. **33-MW-4**

Location: OU4, Site 33, approximately 150 feet west of north corner of perimeter fence.

Date Started: 10/2/96	Completed: 10/7/96	4" PVC Blank Casing: from 0 ft bgs to 11.75 ft bgs
Logged By: J. Bonebrake Harting	Checked By: J. R. Steele, R.G., C.E.G., C.H.G.	0.02" Screening Casing: from 11.75 ft bgs to 21.75 ft bgs
Drilled By: Brent Carpenter, S/G Testing	J.R. Steele, R.G.	5463 Bentonite/Cement Grout: from 1 ft bgs to 4.9 ft bgs
Drilling Equipment: CME 75, 8-inch & 10-inch HSA		Bentonite Transitional Seal: from 4.9 ft bgs to 7.2 ft bgs
Sampling Equipment: 2-inch I.D. Split Spoon		#3 Sand Filter Pack: from 7.2 ft bgs to 22.25 ft bgs
GS Elev.: 64.67 ft above MSL	TD: 23.25 ft bgs	TOC Elev.: 67.04 ft above MSL

Depth (ft. bgs)	MATERIAL DESCRIPTION	Material Symbol	Material Type	Well Construction	Sample	Blow Counts per 6"	Percent Recovery	PID (ppm) Amb/Smp	REMARKS
5	sand, dark yellowish brown (10YR 4/4), fine grained, poorly graded, subrounded to subangular, loose, dry, trace medium sand, trace gravel, trace roots and organic material, dune sand. medium dense.		SP			5 6 8	40	1.1/ 1.2	Start drilling 1040.
10	dark yellowish brown (10YR 4/6), moist.					5 10 13	90	1.0/ 1.4	
15	sand, pale brown (10YR 6/3), fine grained, subrounded and subangular, dense, very moist, trace medium sand, trace silt, dune sand.		SM-SP			9 14 20	90	0.5/ 0.6	
20									

NE Groundwater depth during drilling 21.36 ft bgs Groundwater depth after well development on: 11/12/96

TC Number: A208-09

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20	sand, dark yellowish brown (10YR 4/4), moist, with Monterey derived 1/4-inch gravel.		SM-SP			10	90	0.5/	End drilling 1245. 10/3/96, Water was measured in the borehole at 21.3 ft bgs at 1710. TD 8-inch auger at 23.25 ft. TD 10-inch auger at 22.25 ft. Bottom 1.0 ft of borehole filled with drill cuttings. Well construction completed 10/7/96.
	shale, light olive brown (5YR 4/6), and yellowish red (5YR 4/6), very moist, mottled, weathered, Monterey Formation.		Shale			14		0.6	
						12			
						5	90	0.5/	
						14		0.6	
	gray (2.5YR 6/1), hard with chert layers up to 1-inch thick.					17			
						50/3.5"			
25									
30									
35									
40									
45									